



STATEMENT
OF
THE ALLIANCE OF AUTOMOBILE MANUFACTURERS

BEFORE THE:
SENATE COMMITTEE ON
COMMERCE, SCIENCE AND TRANSPORTATION

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PRESENTED BY:

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Mr. Chairman,

Thank you for the opportunity to testify before the Committee regarding energy issues. My name is Greg Dana and I represent the Alliance of Automobile Manufacturers (Alliance), a trade association of 13 car and light-truck manufacturers. Our member companies include BMW Group, DaimlerChrysler Corporation, Fiat, Ford Motor Company, General Motors Corporation, Isuzu Motors of America, Mazda, Mitsubishi, Nissan North America, Porsche, Toyota Motor North America, Volkswagen of America, and Volvo.

Alliance member companies have more than 620,000 employees in the United States, with more than 250 manufacturing facilities in 35 states. Overall, a recent University of Michigan study found that the entire automobile industry creates more than 6.6 million direct and spin-off jobs in all 50 states and produces almost \$243 billion in payroll compensation annually.

The automobile industry has played an integral role in the economic and job growth of the nation. 2001 was the second best year for new vehicle sales and this was certainly helped by the zero-percent financing offered by many companies in response to the September terrorist attacks. However, the current economic recession has affected many in our country and the automobile industry is no exception.

The economic downturn in the industry offers many challenges for our industry in 2002. In recent months, many companies have announced restructuring plans to address changing business conditions and consumer demands and ensure long-term financial health. The overriding goal has not changed and that is to provide American consumers with a wide of range of vehicle choices to meet their needs and desires. However, policies that are at odds with the market add a real cost to manufacturers and their customers. Higher Corporate Average Fuel Economy (CAFE) standards beyond the maximum feasible level threatens our ability to provide customers with the vehicles they want and/or price increases that reduce demand for new automobiles. Both of these have the potential to undermine the growth of the auto industry and their contribution to U.S. economic growth.

As automakers research, design and build cars and light trucks, a number of factors are taken into consideration including some which are the subject of today's hearing. Technology, safety, utility requirements, and cost are key components for any vehicle and companies are constantly striving to balance these issues in manufacturing vehicles and meeting government regulatory standards. We welcome the opportunity to discuss the Alliance views on our nation's energy policy and, specifically, the benefits of advanced technology vehicles for consumers and its role in domestic policy.

The Alliance supports efforts to create an effective energy policy based on broad, market-oriented principles. Policies that promote research, development and deployment of advanced technologies and provide customer based incentives to accelerate demand of these advanced technologies set the foundation. This focus on bringing advanced technologies to market leverages the intense competition of the automobile manufacturers worldwide. Incentives will help consumers overcome the initial cost barriers of advanced technologies during early market introduction and

increase demand, bringing more energy efficient vehicles into the marketplace.

Over the past year, there has been increased attention on vehicles and their fuel economy levels with particular discussion of the CAFE program. The Alliance believes, however, that Congress does not need to set new standards or change the structure of the program. Current law requires the Department of Transportation (DOT) to promulgate new light truck standards (pickups, SUVs, minivans and vans) at the “maximum feasible level” taking into consideration technological feasibility, economic practicability, the effect of other motor vehicle standards on fuel economy, and the need of the U.S. to conserve energy. These are the same issues that are the focus of today’s hearing. In fact, the National Highway Traffic Safety Administration (NHTSA) has issued a proposal to set standards for the 2004 model year and we expect the agency will soon issue a rulemaking notice to address the proper levels of light truck CAFE standards for the 2005 model year and beyond.

Automakers will be working cooperatively with the agency in these rulemakings. Setting future CAFE standards requires knowledge of automakers’ future product plans, their technology rollout, and their financial situation. This requires NHTSA to gather and analyze a vast amount of data along with proprietary information from manufacturers and suppliers. Given the many variables and uncertainties in the marketplace, automakers believe that NHTSA is the appropriate forum to consider CAFE standards given the complexities of the program and the need to balance public policy goals.

What can Congress do to assist in this process? We urge that the Senate consider new approaches for the 21st century which accelerate the consumers’ acceptance of advanced technologies. The Alliance and its 13 member companies believe that the best approach for improved fuel efficiency is to aggressively promote the development of advanced technologies – through cooperative, public/private research programs and competitive development – and incentives to help pull the technologies into the marketplace as rapidly as possible. We know that advanced technologies with the potential for major fuel economy gains are on the horizon. As a nation, we need to get these technologies developed and on the road as soon as possible in an effort to reach the national energy goals as fast and as safely and efficiently as we can.

In discussions involving energy policy and automakers, consumers cannot be left out of the equation, for their decisions drive today’s sales and influence future research and product planning. According to the Environmental Protection Agency, vehicle fuel efficiency, as measured on a pound for pound basis, has increased nearly 2 percent per year since 1975. The fleet fuel economy has marginally declined, however, representing consumers’ increasing priority for safety, utility and performance. When considering what kind of vehicle to buy, consumers evaluate all the different uses they will demand of their new car or light truck. Most customers select vehicles that best serve their peak uses, whether carrying kids, carpooling adults, towing trailers or handling adverse terrain or weather.

Another important consideration is that technologies that produced significant car fuel economy improvements, such as front wheel drive and aerodynamic styling, are not always possible to a great extent on light duty trucks. The majority of light duty truck buyers have specific performance requirements related to their use of pickups and vans for cargo capacity, towing, and utility.

Manufacturers are developing engine technologies that will increase fuel efficiency and incorporate these performance requirements without impacting those attributes.

R&D Focus:

The University of Michigan study also found that the total R&D spending by the industry is approximately \$18.4 billion per year, with much of it in the high tech sector. In fact, the study stated the following: "The level of automotive R&D spending and the relatively high employment of research scientists and engineers in the U.S. auto industry has traditionally earned it a place in any U.S. government listing of high technology industries generally thought to be central to the long-term performance of the U.S. economy." A number of other industries are affected by the decisions, actions and economic health of the automakers. For instance, automobile companies are the rail industry's 3rd largest customer. Other affected industries include: steel, aluminum, plastics, tires, trucking, glass, iron, carpeting and semiconductor manufacturers.

As we begin the 21st century, the auto industry is committed to developing and utilizing emerging technologies to produce safer, cleaner, more fuel-efficient cars and light trucks. The National Academy of Sciences (NAS), in its July, 2001 report to Congress on CAFE, introduced their discussion of promising technologies by stating that the 1992 NAS report outlined various automotive technologies that were either entering production at the time, or were considered "emerging" based upon their potential and production intent. Automotive technology has continued to advance, especially in microelectronics, mechatronics, sensors, control systems, and manufacturing processes. Most of the technologies identified in the 1992 report as "proven" or "emerging" have already entered production.

The 2001 NAS report also demonstrates the complexity of the CAFE program and the impact on a number of fronts including one of this Committee's key concerns: safety. Following are key excerpts:

"The majority of this committee believes that the evidence is clear that past downweighting and downsizing of the light-duty vehicle fleet, while resulting in significant fuel savings, has also resulted in a safety penalty. In 1993, it would appear that the safety penalty included between 1300 and 2600 motor vehicle crash deaths that would not have occurred had vehicles been as large and heavy as in 1976." (page 2-26)

"If an increase in fuel economy is effected by a system that encourages either downweighting or the production and sale of more small cars, some additional traffic fatalities would be expected." (page 6-5)

The Alliance believes NHTSA, as the nation's highway safety agency, is best situated to issue new fuel economy standards that do not result in a degradation of safety.

Auto manufacturers are working on future technologies such as hybrid and fuel cell vehicles that

may lead to substantial improvements in efficiency and emissions performance without sacrificing safety, utility, and performance. Fuel cell technology also serves as a potential vehicle to move away from a petroleum dependent transportation sector. Successful introduction of these new and emerging technologies all share the need for cooperative efforts that bring all the key stakeholders together...including the automakers, energy providers, government policy makers and most importantly, the customers.

Key Energy Policy Initiatives:

1) Promoting Market-Driven Principles:

The focus on bringing advanced technologies to market leverages the intense competition of the automobile manufacturers worldwide. This competition drives automakers to develop and introduce breakthrough technologies to meet a variety of demands and customer needs in the marketplace.

The National Academy of Sciences summarized this diversity of demand and priorities in the marketplace when it stated that “automotive manufacturers must optimize the vehicle and its powertrain to meet the sometimes-conflicting demands of customer-desired performance, fuel economy goals, emissions standards, safety requirements and vehicle cost within the broad range of operating conditions under which the vehicle will be used.” This necessitates a vehicle systems analysis. Vehicle designs trade off styling features, passenger value, trunk space and utility. These trade-offs will likewise influence vehicle weight, frontal area, drag coefficients and powertrain packaging, for example. These features together with the engine performance, torque curve, transmission characteristics, control system calibration, noise control measures, suspension characteristics and many other factors, will define the drivability, customer acceptance and marketability of the vehicle.

This is a long, but necessary, way of saying that in the end, the customer is in the driver’s seat. Market based incentives and approaches ultimately will help consumers overcome the initial cost barriers of advanced technologies during early market introduction and increase demand, bringing more energy efficient vehicles into the marketplace. This will also accelerate cost reduction as economies of scale are achieved in a timelier fashion.

The Alliance supports enactment of consumer tax credits during early market introduction to help offset the initial higher costs of advanced technology and alternative fuel vehicles until more advancements and greater volumes make them less expensive to produce and purchase. These types of tax incentives would ensure that advanced technology is used to improve fuel economy and energy savings. Performance incentives would be tied to improved fuel economy in order for a vehicle to be eligible for the tax credits. These performance incentives would be added to a base credit that is provided for introducing the technologies into the marketplace.

2) Maintaining Technology Focus:

The Alliance and its 13 member companies believe that the best approach for improved energy security and fuel efficiency gains is to aggressively promote the development of advanced technologies – through cooperative, public/private research programs and competitive development – and incentives to help pull the technologies into the marketplace as rapidly as possible.

The automobile companies are convinced that advanced technologies with the potential for major fuel economy gains are on the horizon which will allow automakers to continue offering products that consumers demand without sacrificing safety, performance or cargo features. Increased costs during early market penetration for those new technologies, however, create a critical hurdle for customer acceptance and demand. As a nation, we need to get these technologies on the road as soon as possible and tax credits will help spur consumer acceptance so we can reach the national energy goals as fast and as efficiently as we can.

New Technologies...Promises and Challenges:

Focus on Powertrain and Vehicle Technologies:

Automobile companies around the globe have dedicated substantial resources to bringing cutting-edge technologies – electric, fuel cell, and hybrid electric vehicles as well as alternative fuels and powertrain improvements – to the marketplace. Each of these technologies bring a set of unique advantages to the marketplace. At the same time, each technology has a unique set of challenges that inhibit widespread commercialization and acceptance. The internal combustion engine, fueled by relatively inexpensive gasoline, has been and continues to be, a formidable competitor against which all new technologies must compete.

For consumers sensitive to cost, fuel economy gains must be compared to the increased investment costs and risks in their new vehicle purchase decision. Assuming today's gasoline price per gallon, a 20 percent increase in vehicle fuel efficiency offers an annual fuel savings of about \$100. This savings must be weighed against the increased vehicle price to provide this 20% as well as the convenience, utility and performance tradeoffs. As automakers, we are keenly aware of the importance of consumer choices and the challenges we have to deliver new technologies that meet their affordability, performance and utility needs.

Fuel Cell Vehicles:

The most promising long-term technology offers breakthrough fuel economy improvements, zero emissions and a shift away from petroleum-based fuels. From a vehicle perspective, hydrogen-fueled fuel cells offer the biggest improvement in efficiency and emissions but at high cost and with major infrastructure challenges. Onboard hydrogen storage also presents some difficulty. Gasoline infrastructure is well established, but gasoline reformers are the least developed and the most costly of reformer technology. Current sulfur content in gasoline will most likely need further reduction to zero or

near zero levels.

A robust fuel cell commercialization plan incorporates breakthroughs and complementary research in stationary power units. A primary challenge in the introduction of fuel cells into America's light vehicle passenger and truck fleet are the packaging restrictions of size and weight. Experience and commercial expansion of stationary power units, relatively unconstrained by size and weight will be helpful gaining the experience necessary to meet the cost targets for commercialization in the vehicle sector.

Hybrid-Electric Vehicles:

Hybrid-electric vehicles can offer a significant improvement in fuel economy. These products capture power through regenerative braking. When decelerating an internal combustion vehicle, the brakes convert the vehicle's kinetic energy into heat, which is lost to the air. By contrast, a decelerating hybrid vehicle can convert kinetic energy into stored energy that can be reused during the next acceleration. Hybrid vehicles do not require additional investments in fuel infrastructure which helps reflect their potential for near term acceptance.

Battery Electric Vehicles:

Vehicles that utilize stored energy from "plug-in" rechargeable batteries offer zero emissions. Battery electric vehicles continue to face weight, energy density, and cost challenges that limit their customer range and affordability.

Advanced Lean Burn Technology Vehicles:

Vehicles that are powered by direct injection diesels are faced with a significant challenge in meeting the new California and Federal exhaust emission standard. If the technology challenges can be overcome, these types of vehicles could provide fuel economy gains in excess of 25 percent above comparable conventional vehicles.

Focus on Fuels and Infrastructure:

Much of the discussion regarding fuel economy centers on the vehicles of the automobile manufacturers and their role in a national energy policy. But it is important not to forget about a vital component for any vehicle – the fuel upon which it operates. As automakers look at the competing regulatory challenges for our products -- fuel efficiency, safety and emissions -- and attempt to move forward with advanced technologies, we must have the best possible and cleanest fuels. EPA has begun to address gasoline quality but fuel needs to get even cleaner. This is important because gasoline will remain the prevalent fuel for years to come and may eventually be used for fuel cell technology.

Low Sulfur Gasoline:

In 1999, new EPA rules were issued which direct oil refiners to reduce the amount of sulfur in gasoline to an average of 30 parts per million, a reduction of 90 percent over current levels. Low sulfur gasoline is vital to ensuring that vehicle pollution control devices, such as catalytic converters, work more efficiently. This is especially important as automakers phase-in more stringent Tier II emission standards beginning in the 2004 model year. Further improvements will be needed especially if gasoline is to be used in fuel cells.

Low Sulfur Diesel:

In addition to alternative fuels, companies are constantly evaluating fuel-efficient technologies used in other countries to see if they can be made to comply with regulatory requirements in the United States. One such technology is diesel engines, using lean-burn technology, which has gained wide acceptance in Europe and other countries. Automakers have been developing a new generation of highly fuel-efficient clean diesel vehicles – using turbocharged direct injection engines – as a way to significantly increase fuel economy and reduce greenhouse gas emissions. However, their use in the U.S. must be enabled by significantly cleaner diesel fuel which provides the best opportunity to achieve the more stringent emission standards in this country.

Last year, EPA promulgated its heavy-duty diesel rule that the Alliance supports, as far as it goes. The rule reduces the amount of sulfur in the fuel. Low sulfur diesel fuel is necessary to enable the new clean diesel technology to be used in future cars and light trucks. Providing cleaner fuels, including lowering sulfur levels in gasoline and diesel fuel, will provide emission benefits in existing on-road vehicles. Unless there are assurances that such fuels will be available, companies will not invest in new clean diesel technologies. Efforts to reduce sulfur content will provide environmental benefits and allow vehicles to operate more efficiently.

As you can tell, the automobile companies – from the top executives to the lab engineers – are constantly competing for the next breakthrough innovation. If I can leave one message with the Committee today, it is to stress that all manufacturers have advanced technology programs to improve vehicle fuel efficiency, lower emissions and increase motor vehicle safety. These are not “pie in the sky” concepts on a drawing board. In fact, many companies have advanced technology vehicles in the marketplace right now or have announced production plans for the near future. That’s why now is the perfect time for the enactment of tax credits to help spur consumers to purchase these new vehicles which years of research and development have made possible.

The Alliance and its member companies would urge that public policy decisions focus on the steps that will achieve real reductions in fuel consumption and which support our national energy goals. The advanced technology fuel-efficient vehicles are typically more expensive than their gasoline counterparts because of the new technologies. Therefore, market penetration is a challenge. As a result, the Alliance supports personal and business tax incentives for the purchase of qualifying advanced technology hybrid and fuel cell powered vehicles as well as alternative fueled vehicles and infrastructure development. These tax incentives should help “jump start” the market penetration of these highly fuel efficient vehicles leading to increased sales and volumes so that the cost will come down in the long-term

with positive implications for energy security.

Thank you for the opportunity to testify before the Committee today. I would be happy to answer any questions you may have.